Date : / /

Name : Shahed Abdullah

ID : 21301128

Section : 04

Course : CSE341

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1.

here,

Total pages = 45, characters per page = 5000

Total characters = 5000 × 45

= 225000

each interrupt is raised by each character.

The total numbers of interrupts will be total number of characters.

So, total interrupts = 225000.

So, total interrupt processing time: 225000 × 50

= 11250000 ms

1 minutes = 60s.

total printing time = 60 × 100000 ms

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So,

Cpu time spent processing interrupts = $\frac{1125000}{60000000}$ x

= 18.75%

2.

from, 1, we got,

interrupt processing time

= 1125000 ms

total printing time = 60000000 ms

cpu time spent processing interrupts = 18.75%

15 %

time

cpu taken by polling-driven implementation =

So, interrupt driven implementation is greater than cpu time taken by polling-driven implementation

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So, Alice should swithe to polling-driven implementation as it takes less times.

3.

I have an 80286 where IOPL bits are set to 01. Program X set to privilage level 2.

IOPL bits are part of the flag register the values 00, 01, and 10 are used to indicate different privilage level.

I/o device cannot not sent data directly for program X. Since program X operates at level 2 and IOPL bits

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are set to 01. which allow I/O operations only upto privilage level 1.

4.